

Remarks

1. Summary of the Office Action

In the final office action mailed September 7, 2007, the Examiner maintained rejections of claims 1-12, 14-16, 18-21, and 23-30 under 35 U.S.C. § 103(a) as being allegedly obvious over U.S. Patent Application Pub. No. 2001/0031621 (Schmutz) in view of U.S. Patent No. 5,987,304 (Latt). Further, the Examiner maintained rejections of claims 13, 17, and 22 under 35 U.S.C. § 103(a) as being allegedly obvious over Schmutz in view of Latt in view of U.S. Patent No. 6,463,298 (Sorenson).

2. Status of the Claims

Pending are claims 1-14 and 16-30, of which claims 1, 18, and 25 are independent and the remainder are dependent.

3. Response to Rejections

The Examiner has maintained rejections of each of the independent claims as being allegedly obvious over Schmutz in view of Latt. However, Applicant submits that these rejections are improper and should be withdrawn, because the invention recited in the independent claims does not logically or reasonably follow from the teachings of Schmutz and Latt and therefore would not have been obvious to one of ordinary skill in the art at the time the present invention was made.

The independent claims recite the invention as a wireless repeater and method, where the repeater determines one or more attributes of a wireless signal received from a BTS, such as a frequency of the signal and/or information indicating a wireless provider, and, by comparison the one or more attributes with a reference list, the repeater selects one or more operating frequencies and filters out other frequencies. This arrangement is not suggested by Schmutz or Latt, and the arrangement does not follow reasonably from the disclosures of either Schmutz or

Latt. Consequently, the Examiner has not established *prima facie* obviousness of the independent claims over Schmutz in view of Latt, and the claims should be therefore be allowed.

As noted in Applicant's last response, Schmutz teaches a system in which a BTS transmits to a wireless repeater a list of frequencies for the wireless repeater to use, and the repeater uses those frequencies. That arrangement is in stark contrast to the invention recited in Applicant's claims, since Schmutz does not involve selecting an active set of one or more frequency bandwidths based on a comparison of one or more attributes of the received wireless signal with a reference list that includes one or more preferred frequency bandwidths.

In Schmutz, the repeater functions to receive, amplify, and transmit signals at predefined frequencies, in accordance with a set list of operating frequencies provided in advance to the repeater. As such, the operative "filter" in Schmutz is defined in a fixed manner, pursuant to the predefined transmission list, with the repeater operating on just the frequencies specified in the predefined transmission list. Even if we interpret that predefined transmission list to be akin to the "reference list" in Applicant's claims, however, Schmutz is still substantially different than Applicant's claimed invention and does not reasonably lead to Applicant's claimed invention.

The repeater of Applicant's claims selects an active set of one or more frequencies, and thus defines other frequencies (i.e., those that are *not* in the active set) to filter out at a reception stage, based on a comparison of received signal attributes with a predefined list of preferred operating frequencies. Thus, even giving Applicant's claims their broadest reasonable interpretation, the claims clearly require using a comparison of received signal attributes with a predefined list of preferred operating frequencies as a way to select the active set of frequencies for the repeater's receive-filter, such that the repeater will filter out other frequencies not in the selected active set. As such, contrary to Schmutz's use of a fixedly defined frequency filter (pursuant to a predefined transmission list), Applicant's claims clearly involve using attributes of

a received signal in order to *dynamically* establish which frequencies to filter out at the receive-stage. (Applicant does not assert that the claims use the language "dynamically establishing" in establishing which frequencies to filter out at the reception stage. However, a reasonable reading of the claims as a whole makes that meaning clear.)

Applicant respectfully requests the Examiner to reconsider the remarks set forth in Applicant's last response. As explained there, the Examiner's asserted rationale for establishing obviousness does not make sense. In particular, in rejecting the claims, the Examiner relied on Schmutz's teachings of (i) the repeater receiving a transmission list that defines operating frequencies for the repeater, and (ii) the repeater filtering out unwanted frequencies in accordance with the transmission list. However, the Examiner's proposal to use Schmutz's predefined transmission list of frequencies for comparison with determined attributes of a received wireless signal in order to determine one or more frequencies at which the repeater should operate would not make sense -- since the received list of frequencies itself already specifies the frequencies at which the repeater should operate.

Phrased another way, the Examiner's proposed modification of Schmutz would change the basic principle of operation of Schmutz and would thus preclude *prima facie* obviousness. In particular, Schmutz teaches that the repeater operates in a fixed manner at frequencies defined by a transmission list. Modifying Schmutz to achieve the invention recited in Applicant's claims would substantially change that basic principle of operation, since, in accordance with Applicant's claims, the result of the modification would be to use a comparison of received signal attributes with a reference list as a basis to select an active set of one or more frequency bandwidths and to then filter out at a reception stage signals that are not within the selected active set rather than having a fixed reception filter. Under M.P.E.P. § 2143.01(VI), this change

in the principle of operation of the cited art precludes the art from rendering the claimed invention *prima facie* obviousness.

In the "Response to Arguments" section of the final office action, the Examiner argued that (i) Schmutz teaches having a repeater detect one or more attributes of a wireless signal and (ii) Schmutz teaches storing a reference list and comparing the attributes with the reference list. More particularly, the Examiner argued that the reference list is the predefined transmission list defining the operating frequencies of the repeater, and the Examiner argued that the detecting of the attributes of the received wireless signal involves converting the received signal's frequency, modulating the signal, and scanning frequency channels. Further, the Examiner argued that the reference list is used "for comparison" to the received signal attributes, apparently because, by definition, the repeater operates at the frequencies designated by the predefined transmission list.

It seems that the Examiner thus considered the "comparison" to be met by Schmutz's teaching of a repeater applying a filter that is fixedly defined to operate at just the frequencies specified in a predefined transmission list. However, this reading of Schmutz would disregard the language of Applicant's claims as a whole, where the claims recite that the comparison is used as a basis to select the active set in the first place, and that the repeater filters out signals falling outside that selected active set. Schmutz does not teach or reasonably suggest this.

Still further, the Examiner has admitted that Schmutz fails to teach the independent claim function of comparing the one or more determined attributes of the received wireless signal with a reference list and, based on the comparison, selecting operating frequencies and so forth as recited in the claims. The Examiner then turned to Latt in an effort to overcome this deficiency. In particular, the Examiner relied on Latt's teaching of a band pass filter passing an entire incoming signal that coincides with the filter band (at column 3, lines 25-30) and Latt's teaching of varying the overlap pass band of the repeater (at column 3, lines 32-52). However, these

teachings do not make up for the admitted deficiency of Schmutz, as these teachings similarly do not involve comparing one or more determined attributes of a received wireless signal with a reference list and setting and applying one or more frequency bandwidths of the repeater in accordance with the comparison.

Schmutz and Latt both describe remotely controlling or configuring a wireless repeater. However, neither reference, nor the combination of references, involves the innovative features of Applicant's claims. Furthermore, Applicant's claimed invention does not follow logically from the teachings of Schmutz and Latt. And still further, as discussed above, it would be illogical to modify the disclosure of Schmutz in the manner apparently contemplated by the Examiner, since doing so would change the basic principle of operation of the repeater in Schmutz. Consequently, the Examiner has not established *prima facie* obviousness of the independent claims over Schmutz and Latt.

For at least these reasons, Applicant submits that the independent claims are allowable. In addition, without conceding the Examiner's assertions regarding the dependent claims, Applicant submits that the dependent claims are allowable for at least the reason that they depend from the allowable independent claims.

Accordingly, Applicant respectfully requests favorable reconsideration and allowance of all of the pending claims.

Should the Examiner wish to discuss this case with the undersigned, the Examiner is invited to call the undersigned at (312) 913-2141.

Respectfully submitted,
McDONNELL BOEHNEN
HULBERT & BERGHOFF LLP

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By: /Lawrence H. Aaronson/
Lawrence H. Aaronson
Reg. No. 35,818